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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/821,757	03/30/2001	Philipp Albert	41724W003	5161

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EXAMINER

YEH, JAMES T

ART UNIT

PAPER NUMBER

1714

DATE MAILED: 04/10/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/821,757

Applicant(s)

ALBERT ET AL.

Examiner

James T Yeh

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-- Th MAILING DATE of this communication appears on the cover sheet with the corresponding address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 7-13, 15-16 is/are rejected.
- 7) ☒ Claim(s) 5, 6 and 14 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1. Claims 3 and 4 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 3 and 4 state "...wherein the residue Y has one or more groups."

It is unclear what "groups" the applicant intends to indicate. It is suggested to add the term "of the following" to Claims 3 and 4 so they read: "...wherein the residue Y has one or more of the following groups:" if the applicant meant the groups listed below the statement.

Non-statutory Obviousness Double-Patenting

The following is a quotation of the appropriate paragraph of MPEP 804 that forms the basis for the rejections under this section made in this Office:

Further, those portions of the specification which provide support for the patent claims may also be examined and considered when addressing the issue of whether a claim in the application defines an obvious variation of an invention claimed in the patent.

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude"

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granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 1-4,7-13,15 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-18 of copending Application No. 09/811,822 by Albert. Although the conflicting claims are not identical, they are not patentably distinct from each other.

Copending Application '822 discloses a dental material comprising a filler and an ormocer as shown in formula (II), which can be polymerized cationically and initiated by light (copending '822 Claims 1,2,11,18). The structure of formula (II) includes a pendant R wherein the R denotes, independently, hydrogen, methyl or ethyl; R¹, an aliphatic, cycloaliphatic or aromatic group with 1 to 20 carbon atoms; X, a hydrolysable group; Y group, independently, an unsubstituted or substituted, aliphatic, cycloaliphatic or aromatic group with 1 to 30 carbon atoms, wherein one or more CH₂ groups can be replaced by O, C=O, -CO₂-, -SiR₂-, and/or -SiR₂O- (copending '822 Claim 2). An example of the ormocer is given in formula (III) (copending '822 Claim 2). In paragraphs 76 and 77 of the specification the copending application lists examples of the inventive

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monofunctional or polyfunctional ormocer vinyl ethers. '822 copending application further discloses the polymerization of ormocers being initiated by light with initiators such as iodonium salt and accelerators (copending '822 Claims 11 and Paragraph 70,72). A dental material using the ormocers can be added with a filler material such as quartz, ground glass, zeolite in the range of 1 to 95 wt %, preferably in the range of 65 to 90 wt % (copending '822 Claim 17 and Paragraphs 81,84). It is the Examiner's position to recognize the polymerizable monomers, such as the ormocers revealed in the instant application, in dental filling or restoration as the dental adhesive material. This is commonly known with one skilled in the art and reference can be found in Claim 1 of Rheinberger (U.S. 5,936,006). This meets the limitation of the instant claim 11.

This is a provisional obviousness-type double patenting rejection.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Application No. 09/811,822 in view of Alkemper (U.S. 6,362,251).

The discussion with regard to ormocer's uses in dental application in Paragraph 2 is incorporated here by reference.

The difference between the instant application and the copending publication is the process of producing such dental material.

Alkemper discloses a dental material system comprising ormocers as binders, a catalyst for photo-polymerization, fillers, and a process for their production (Abstract). In his Example 5 in column 11 filler, monomer, and catalyst are mixed and cured by light.

In light of the discussion of the process to produce a dental material using ormocers, catalyst, and fillers material, as taught by Alkemper, it would have therefore been obvious to one of ordinary skill in the art to apply such process principle to the '822 copending application and thereby arrive at the claimed invention.

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4. Claims 1-4,7-13,15-16 are rejected under 35 U.S.C. 103(a) as being obvious over Albert et al (copending Application No. 09/811,822) in view of Alkemper (U.S. 6,362,251).

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). For applications filed on or after November 29, 1999, this rejection might also be overcome by showing that the subject matter of the reference and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person. See MPEP § 706.02(I)(1) and § 706.02(I)(2).

The discussion with regard to the composition and preparation of dental material using ormocers, fillers, and initiators in Paragraphs 2 and 3 above is incorporated here by reference.

Allowable Subject Matter

5. Claims 5,6,14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claims 5,6,14 would be allowable because the closest prior art of record, Albert et al of copending application 09/811,822, does not disclose or suggest the ormocer monomer's molecular weight range, its viscosity range, and the flexural/modulus strength range of the polymer produced using DIN test methods (DIN 53 452 and 53 457).

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following patents are cited to further show the state of the art with respect to the present application in general:

U.S. Pat. No. 6,258,342 to Harcum et al – denture adhesive and alginate,
calcium sulfate for toothpaste
formulation

U.S. Pat. No. 4,804,412 to Komiyama et al – denture adhesive with water-
soluble polymer as base material

U.S. Pat. No. 5,844,019 to Kato – tooth-surface treatment with water-
soluble polymer and alginate

U.S. Pat. No. 5,843,348 to Giordano – dental material with polymerizable
monomer and colloidal silica to alter
refractive index

U.S. Pat. No. 4,306,913 to Mabie et al – powder metal oxide, silica, particle
size, refractive index and their
relevance to dental composite
application

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to James Yeh whose telephone number is (703) 305-3139. The examiner can normally be reached on Monday – Friday from 8:00 am to 5:30 pm with the exception of the first Friday per bi-week. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan, can be reached at (703) 306-2777.

James T. Yeh, Ph.D.
April 4, 2002



EDWARD J. CAIN
PRIMARY EXAMINER
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